

**CLAIMS**

What is claimed is:

1. A method for a client system to exchange data with an application server running a decision optimization engine, comprising:  
5 generating a request document at the client system having one or more request child elements, wherein at least one of the request child elements comprises a command to the decision optimization engine;

sending the request document to the application server; and

receiving a response document from the application server, wherein the response

10 document was generated by the decision optimization engine and comprises one or more response child elements.

2. The method of claim 1, wherein at least one of the response child elements

corresponds to at least one of the request child elements.

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3. The method of claim 1, wherein the request document is an Extensible Markup Language (XML) document.

4. The method of claim 1, wherein the response document is an Extensible

20 Markup Language (XML) document.

5. A method for an application server running a decision optimization engine to exchange data with a client system, comprising:

receiving a request document from the client system having one or more request child elements, wherein at least one of the request child elements comprises a command for the  
5 decision optimization engine;

performing the at least one command contained in the request document using the decision optimization engine;

generating a response document using the decision optimization engine having one or more response child elements; and

10 sending the response document to the client system.

6. The method of claim 5, wherein at least one of the response child elements corresponds to at least one of the request child elements.

15 7. The method of claim 5, wherein the request document is an Extensible Markup Language (XML) document.

8. The method of claim 5, wherein the response document is an Extensible Markup Language (XML) document.

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9. The method of claim 1, wherein one of the request child elements comprises a credentials element.

10. The method of claim 9, wherein the credentials element comprises at least a first credentials child element, a second credentials child element, and a third credentials child element.

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11. The method of claim 10, wherein the first credentials child element comprises an organization element.

12. The method of claim 10, wherein the first credentials child element comprises  
10 an enterprise element.

13. The method of claim 10, wherein the second credentials child element comprises a username element.

15 14. The method of claim 10, wherein the third credentials child element comprises a password element.

15. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform at least one of creating  
20 a scenario, deleting a scenario, renaming a scenario, copying a scenario, downloading a scenario, updating a scenario, or modifying a scenario.

16. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to retrieve a scenario.

17. The method of claim 1, wherein the commands element comprises at least one  
5 commands child element instructing the application server to retrieve a master scenario.

18. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to set a master scenario.

10 19. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform at least one of creating a plan, deleting a plan, renaming a plan, copying a plan, downloading a plan, updating a plan, or modifying a plan.

15 20. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to retrieve a plan.

21. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to retrieve a master plan.

20 22. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to set a master plan.

23. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform a data analysis.

5 24. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to regenerate a data analysis.

25. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to a retrieve an analysis.

10 26. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform at least one of aborting an analysis or deleting an analysis.

15 27. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform a risk analysis.

20 28. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform a gated product analysis.

29. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform a gating components analysis.

5 30. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform a tornado analysis.

31. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to create an optimal plan.

10 32. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to regenerate an optimal plan.

15 33. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to abort an optimal plan.

34. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to load a set of data for an analysis.

20 35. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to extract source data.

36. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform at least one of adding a user, deleting a user, freezing a user, or switching a user.

5       37. The method of claim 1, wherein the commands element comprises at least one commands child element instructing the application server to perform at least one of creating a planning environment, retrieving a planning environment, loading a planning environment, deleting a planning environment, renaming a planning environment, copying a planning environment, adding a user to a planning environment, removing a user from a planning  
10      environment, or changing a user in a planning environment.

38. The method of claim 16, wherein one of the response child elements comprises a scenario.

15       39. The method of claim 17, wherein one of the response child elements comprises a scenario.

40. The method of claim 18, wherein one of the response child elements comprises a scenario.

20       41. The method of claim 20, wherein one of the response child elements comprises a plan.

42. The method of claim 21, wherein one of the response child elements comprises a plan.

5 43. The method of claim 22, wherein one of the response child elements comprises a plan.

44. The method of claim 23, wherein one of the response child elements comprises an analysis.

10 45. The method of claim 24, wherein one of the response child elements comprises an analysis.

15 46. The method of claim 25, wherein one of the response child elements comprises an analysis.

47. The method of claim 27, wherein one of the response child elements comprises a risk analysis.

20 48. The method of claim 28, wherein one of the response child elements comprises a gated products analysis.

49. The method of claim 29, wherein one of the response child elements comprises a gating components analysis.

50. The method of claim 30, wherein one of the response child elements comprises  
5 a tornado analysis.

51. The method of claim 31, wherein one of the response child elements comprises  
a plan.

10 52. The method of claim 32, wherein one of the response child elements comprises  
a plan.

53. The method of claim 34, wherein one of the response child elements comprises  
data validation results.

15 54. The method of claim 35, wherein one of the response child elements comprises  
source data.

55. A computer-readable medium having stored therein one or more sequences of  
20 instructions for a client system to exchange data with an application server running a decision  
optimization engine, the one or more sequences of instructions causing one or more  
processors to perform a number of acts, said acts comprising:

generating a request document having one or more request child elements at the client system, wherein at least one of the request child elements comprises a command to the decision optimization engine;

sending the request document to the application server; and

5 receiving a response document from the application server, wherein the response document was generated by the decision optimization engine and comprises one or more response child elements.

56. The method of claim 55, wherein at least one of the response child elements

10 corresponds to at least one of the request child elements.

57. A computer-readable medium having stored therein one or more sequences of instructions for an application server running a decision optimization engine to exchange data with a client system, the one or more sequences of instructions causing one or more

15 processors to perform a number of acts, said acts comprising:

receiving a request document from the client system having one or more request child elements, wherein at least one request child element comprises a command for the decision optimization engine;

20 performing the at least one command contained in the request document using the decision optimization engine;

generating a response document using the decision optimization engine having one or more response child elements; and

sending the response document to the client system.

58. The method of claim 57, wherein at least one of the response child elements corresponds to at least one of the request child elements.

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59. An application server system for exchanging data with a client system, comprising:

a computer that comprises:

a processor;

10 a main memory communicatively coupled to the processor; and

a storage device communicatively coupled to the processor;

a database running on the computer from the main memory, the database comprising:

one or more data structures relating to one or more request documents stored in

the storage device; and

15 one or more data structures relating to one or more response documents stored

in the storage device; and

a decision optimization engine coupled to the database and configured to:

receive a request document from the client system having one or more request

child elements, wherein at least one of the request child elements

20 comprises a command for the decision optimization engine;

perform the at least one command contained in the request document;

generate a response document having one or more response child elements;

and

send the response document from the application server to the client system.

5        60.      A client system for exchanging data with an application server running a decision optimization engine, comprising:

a computer that comprises:

      a processor;

      a main memory communicatively coupled to the processor; and

10        a storage device communicatively coupled to the processor;

      a database running on the computer from the main memory, the database comprising:

      one or more data structures relating to one or more request documents stored in  
                the storage device; and

      one or more data structures relating to one or more response documents stored  
                in the storage device; and

15        an application program coupled to the database and configured to:

      generate a request document having one or more request child elements,

                wherein at least one of the request child elements comprises a  
                        command for the decision optimization engine;

20        send the request document from the client system to the application server; and  
                receive a response document from the application server.

61. An application server system for exchanging data with a client system, comprising:

- means for processing information;
- means for storing volatile data;
- 5 means for storing non-volatile data;
- means for receiving a request document from the client system having one or more request child elements, wherein at least one of the request child elements comprises a command;
- means for performing the at least one command contained in the request document;

10 means for generating a response document having one or more response child elements; and

- means for sending the response document from the application server to the client system.

15 62. A client system for exchanging data with an application server, comprising:

- means for processing information;
- means for storing volatile data;
- means for storing non-volatile data;
- means for generating a request document having one or more request child elements,

20 wherein at least one request child element comprises a command;

- means for sending the request document from the client system to the application server; and

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means for receiving a response document from the application server.

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